#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/Ala Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-006740 Address: 333 Burma Road **Date Inspected:** 12-May-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 1845 **Project Name:** SAS Superstructure **OSM Departure Time:** 645 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name:** Tu Jun **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Tower and OBG Components

# **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

#### BAY 3

This QA Inspector, George Goulet, proceeded to the Bay 3 in response to a ZPMC notification of witness inspection #3054 for MT inspection as follows:

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD9-PP063. The weld designations reviewed are as follows: 035~038, 063, 064, 140.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD9-PP069. The weld designations reviewed are as follows: 033, 034, 141, 142.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD9-PP066. The weld designations reviewed are as follows: 097, 098, 099, 100.

(Continued Page 2 of 5)

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD5-PP69. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD5-PP63. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP67. The weld designations reviewed are as follows: 097~100.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as SSD15-PP61. The weld designations reviewed are as follows: 189, 190.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as SSD15-PP71. The weld designations reviewed are as follows: 189, 190.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as SSD9A-PP61. The weld designations reviewed are as follows: 189, 190, 193, 194.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP65. The weld designations reviewed are as follows: 097~100.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP66. The weld designations reviewed are as follows: 097~100.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD5-PP71. The weld designations reviewed

(Continued Page 3 of 5)

are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD5-PP67. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP66. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP62. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP65. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP67. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP61. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP70. The weld designations reviewed are as follows: 095, 096, 097, 105.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD4-PP70. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet,

(Continued Page 4 of 5)

generated an MT report for this date. The member is identified as CSD3-PP68. The weld designations reviewed are as follows: 095, 096, 097, 105.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP64. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD5-PP61. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD4-PP64. The weld designations reviewed are as follows: 095, 096, 097, 105.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP65. The weld designations reviewed are as follows: 097~100.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as SSD9A-PP71. The weld designations reviewed are as follows: 189, 190, 193, 194.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD4-PP62. The weld designations reviewed are as follows: 098~106.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD005-PP63. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD4-PP68. The weld designations reviewed are as follows: 098~104.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area

(Continued Page 5 of 5)

previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD3-PP71. The weld designations reviewed are as follows: 035~038.

This QA Inspector, George Goulet, performed random VT and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector, George Goulet, generated an MT report for this date. The member is identified as CSD6-PP67. The weld designations reviewed are as follows: 035~038.

#### Bay 10

This QA Inspector, George Goulet, randomly observed the following work in progress in Bay 10:

SAW welding of weld joint SSD1-FDSA4-1A/C-14B located on PCMK south tower, lift 4, skin D. Welder was identified as 207746. ZPMC QC was identified as CWI Tu Jun (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Lu Wei Chao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-T-2221-B-U3c-S-2. Also at this location and appearing to be monitoring the welding was ABF Representative Jiang Zi Wen.

SMAW tack welding of weld joints SSD1-FBSA4-1A/C-22, 15A-1 located on PCMK south tower, lift 4, skin B. Welders were identified respectively as 050253, 040475. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Lu Wei Chao, who was not a CWI. The welding variables recorded by QC1 and his assistant appeared to comply with WPS-B-T-2211-B-U3b.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

#### **Summary of Conversations:**

As noted above, and this QA Inspector, George Goulet, asked each QC if all the welding variables observed by him appeared to comply with the appropriate WPS, including the preheat requirements according to thickness of the thickest member being welded. Each QC showed this QA Inspector, George Goulet, that he was carrying the proper temperature sticks to monitor the minimum and maximum preheat and interpass temperatures and replied that all he observed did appear to comply.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 134-8257-0045, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Carreon, Albert	QA Reviewer